

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

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**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD)
for a Part 70 Significant Source Modification**

Source Background and Description

Source Name:	U. S. Steel – Gary Works
Source Location:	One North Broadway Street, Indiana 46402
County:	Lake
SIC Code:	3312
Operation Permit No.:	T089-7663-00121
Operation Permit Issuance Date:	Not yet issued
Significant Source Modification No.:	089-19709-00121
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed a modification application from U. S. Steel – Gary Works relating to the construction of the following emission units and pollution control devices:

- (a) This project consists of reconfiguring the fuel supply piping at the four (4) slab reheat furnaces at the 84-inch Hot Strip Mill to enable the firing of coke oven gas, in conjunction with natural gas, above and below the slabs in the heating zones of each furnace. Currently, only the pre-heat and soak zones are able to burn coke oven gas. By enabling the conversion from natural gas to coke oven gas, there will be a reduction in the source operating costs because the coke oven gas, a byproduct of the coke-making process, is produced at the source while the natural gas is purchased from off-site sources. However, the maximum coke oven gas flow capability to the four (4) slab reheat furnaces will remain limited by the supply header to 1.044 MMSCF per hour.
- (b) The furnaces and the associated burners will not be modified, and there is no increased utilization or increased capacity in processes either upstream or downstream of the furnaces. The project is intended to increase the actual consumption of by-product coke oven gas (which is currently flared or burned at the plate mill), and decrease the actual consumption of purchased natural gas at the reheat furnaces.

History

On October 8, 2004, U.S. Steel - Gary Works submitted an application to IDEM, OAQ requesting to reconfigure the fuel distribution system at the four (4) slab reheat furnaces at the 84-inch Hot Strip Mill. These furnaces have been operating under approvals from the Gary Department of Environmental Affairs, including but not limited to Certificate of Operation Permit Numbers 02534, 02535, 02356, and 02537, re-issued on August 17, 1999.

U.S. Steel - Gary Works submitted an application for a Part 70 permit on December 13, 1996. Since that time, U.S. Steel has applied for and received several source modification approvals. The scope of this project will not affect the capacity or throughput of any other operations at the source.

Enforcement Issue

There is no enforcement action applicable to this modification.

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Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:
Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 8, 2004. Additional information was received on January 14, 2005 and February 3, 2005.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (page 1 and 4).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the increase in PTE after modification based on COG usage in burners previously capable of utilizing natural gas only.

Pollutant	Potential To Emit (tons/year)
PM	No increase
PM10	No increase
*SO ₂	1, 238
VOC	67.0
CO	No increase
NO _x	No increase

Potential to Emit of Modification After Issuance Reflecting major PSD or Emission Offset applicability

The Permittee has provided information as part of the application for this approval that based on an Actual to Projected Actual test in 326 IAC 2-3-2 and 326 IAC 2-2-2, this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1 or Emission Offset under 326 IAC 2-3-1. IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with source obligation requirements in 326 IAC 2-2-8 and Applicability in 326 IAC 2-3-2.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4) because the potential to emit of SO₂ and VOC are greater than 40 and 25 tons per year, respectively.

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County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	Attainment
SO ₂	Primary non-attainment
NO ₂	Attainment
1-hour Ozone	Severe Non-attainment
8-hour Ozone	Moderate Non-attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.
- (1) On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Lake County has been designated as nonattainment in Indiana for the 1-hour ozone standard. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (2) VOC and NOx emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Lake County has been classified as attainment in Indiana for PM10, CO and Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Lake County has been classified as primary nonattainment in Indiana for SO₂. Therefore, SO₂ emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (d) Fugitive Emissions
 Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2 or 2-3, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

Pollutant	*Emissions (tons/year)
PM	2,207
PM10	2,207
SO ₂	4,182
VOC	1,941
CO	68,687
NOx	5,343

*These emissions are based on 2001 Lake County Plant Emissions as reported to IDEM, OAQ.

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This existing source is a major stationary source because:

- (a) An attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is in one of the 28 listed source categories.
- (b) A non-attainment regulated pollutant is emitted at a rate of 100 tons per year or more.

Federal Rule Applicability

- (a) This significant source modification does not involve a pollutant-specific emissions unit:
 - (1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and
 - (2) that is subject to an emission limit and has a control device that is necessary to meet that limit.

Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable to this modification.

- (b) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in the permit to this proposed modification.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61, and 40 CFR Part 63) included in the permit for this proposed modification.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration); 326 IAC 2-3 (Emission Offset)

U.S. Steel is in one (1) of the twenty-eight (28) source categories. The source has a potential to emit each of the criteria pollutants above Part 70 major source levels and applied for a Part 70 permit on December 13, 1996, which is currently being drafted. The Permittee submitted an application on October 8, 2004 requesting the reconfiguration of the fuel supply piping at the four (4) existing continuous slab reheat furnaces at the 84-inch Hot Strip Mill. The potential to emit of CO, NOx, and VOC from this modification are greater than 100, 40 and 25 tons per year, respectively. However, as per the information provided by the Permittee in the permit application, based on Actual to Projected Actual test in 326 IAC 2-3-2 and 326 IAC 2-2-2, this modification at a major stationary source will not be major for Emission Offset under 326 IAC 2-3-1 and Prevention of Significant Deterioration under 326 IAC 2-2-1.

Also, the modification will result in a net decrease in VOC emissions. However, an evaluation of VOC emissions from U.S. Steel - Gary Works during the five-year period prior to and including 2004 were evaluated for emissions offset applicability as follows:

Project	VOC Emission Increases (tons/year)
Plate Mill Heat Treat Furnace	0.42
Batch Anneal Furnaces	0.05
Levy Modifications	0.17
RTO Sludge Dryers	0.02
Modified Oil Reclamation Plant	0.17

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Project	VOC Emission Increases (tons/year)
US Aggregates Slag Processing Facility	0.01
Boiler No. 4A	0.36
Tar Centrifuge Plant	7.03
Sinter Plant Burners/Coke Oven Battery injection jets	0.75
EGL Boiler Modifications	0.54
Brandenburg Blast and Paint Booths	0.12
84-inch hot strip mill COG re-distribution project	1.06
Total Emissions	8.58

The emission increases for VOC over the last five (5) years are less than the de minimis levels of twenty-five (25) tons per year.

Therefore, this modification is not subject to the requirements of 326 IAC 2-3 (Emission Offset).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - 84-Inch Hot Strip Mill Continuous Slab Reheat Furnaces

326 IAC 7-4-1.1 (Lake County SO₂ Emission Limitations)

Pursuant to 326 IAC 7-4-1.1(c)(22)(G)(iv), the fuel supplied to the four (4) re-heat furnaces (coke oven gas, fuel oil, and natural gas) shall not result in a sulfur dioxide emission rate exceeding four hundred forty-seven thousandths (0.447) pounds per million Btu actual heat input.

326 IAC 6-1-10.1 (Lake County PM₁₀ Emission Requirements)

The 84-inch hot strip mill continuous slab reheat furnaces (# 1, 2, 3 and 4) are subject to 326 IAC 6-1-10.1 (Lake County PM₁₀ Emission Requirements), which was promulgated on November 8, 2001. Pursuant to this rule:

- (a) The particulate emissions are limited as follows:

Emission Unit	Heat Input Limit (lb/MMBTU)	Emission Limit (lb/hour)
Each stack serving the 84-inch hot strip mill slab re-heat furnaces (four (4) units)	0.017	40.80 (total)

- (b) There are no opacity limits specified for the four (4) continuous slab reheat furnaces [326 IAC 6-1-10.1(e)]. Therefore, the four (4) continuous slab reheat furnaces shall comply with the requirements of 326 IAC 5-1-2 (Opacity Limitations) as given under the state rule

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applicability section for the entire source.

326 IAC 8-1-6 (New Facilities: General Reduction Requirements)

The 84-inch hot strip mill continuous slab reheat furnaces (# 1, 2, 3 and 4) are not subject to the requirements of 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) because these reheat furnaces were constructed before January 1, 1980, the applicability date for this rule.

Compliance Testing

No testing is required for this modification. However, if IDEM, OAQ require testing, the Permittee shall perform testing for these facilities to verify compliance with applicable rules of this permit utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this modification.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-19709-00121.

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Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	U. S. Steel – Gary Works
Source Location:	One North Broadway Street, Gary, Indiana 46402
County:	Lake
SIC Code:	3312
Operation Permit No.:	T089-7663-00121
Operation Permit Issuance Date:	Not yet issued
Significant Source Modification No.:	089-19709-00121
Permit Reviewer:	ERG/SD

On March 15, 2005, the Office of Air Quality (OAQ) had a notice published in The Post Tribune, Merrillville, Indiana, stating that U. S. Steel – Gary Works had applied for a Part 70 Significant Source Modification relating to reconfiguring the fuel supply piping at the four (4) slab rehear furnaces at the 84-inch Hot Strip Mill to enable the firing of coke oven gas, in conjunction with natural gas, above and below the slabs in the heating zones of each furnace. The furnaces and the associated burners will not be modified. The maximum coke oven gas flow capability to the four (4) slab rehear furnaces will remain limited by the supply header to 1.044 MMSCF per hour. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified, if applicable, to reflect these changes.

1. Indiana was required to incorporate credible evidence provisions into state rules consistent with the SIP call published by U.S. EPA in 1997 (62 FR 8314). Indiana has incorporated the credible evidence provision in 326 IAC 1-1-6, therefore, the condition reflecting this rule has been added to the permit.

B.5 Credible Evidence [326 IAC 2-7-5(3)]~~[326 IAC 2-7-6]~~[62 FR 8314] [326 IAC 1-1-6]

~~Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.~~ **For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.**

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Appendix A: Emission Calculations
Natural Gas Combustion Only
Four (4) Reheat Furnaces

Company Name: U.S. Steel - Gary Works
Address: One North Broadway Street, Gary, Indiana 46204
SSM: 089-19709
Pit ID: 089-00121
Reviewer: ERG/SD
Date: March 10, 2005

Heat Input Capacity
MMBtu/hour

1186

Potential Throughput
MMCF/year

10386

	Pollutant					
	* PM	* PM10	SO ₂	** NO _x	VOC	CO
Emission Factor (lb/MMCF)	7.6	7.6	0.6	280	5.5	84.0
Potential To Emit (tons/year)	39.5	39.5	3.12	1454	28.6	436

*PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

** Emission factor for NO_x = 280 lb/MMCF.

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

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Appendix A: Emission Calculations
Natural Gas Combustion Only
Four (4) Reheat Furnaces

Company Name: U.S. Steel - Gary Works
Address: One North Broadway Street, Gary, Indiana 46204
SSM: 089-19709
Pit ID: 089-00121
Reviewer: ERG/SD
Date: March 10, 2005

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential To Emit (tons/year)	1.09E-02	6.23E-03	3.89E-01	9.35E+00	1.77E-02

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential To Emit (tons/year)	2.60E-03	5.71E-03	7.27E-03	1.97E-03	1.09E-02

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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Appendix A: Emission Calculations**Coke Gas Combustion Only****Four (4) Reheat Furnaces****Company Name:** U.S. Steel - Gary Works**Address:** One North Broadway Street, Gary, Indiana 46204**SSM:** 089-19709**Pit ID:** 089-00121**Reviewer:** ERG/SD**Date:** March 10, 2005Heat Input Capacity
MMBtu/hourPotential Throughput
MMCF/year

1186

10386

Pollutant

	⁽¹⁾ PM	⁽¹⁾ PM10	⁽²⁾ SO ₂	NO _x	VOC	CO
Emission Factor (lb/MMCF)	6.20	4.35	239	80	18.4	1.20
Potential To Emit (tons/year)	32.2	22.6	1241	415	95.5	6.23

(1) PM and PM10 emission factors are filterable and condensable PM and PM10 combined.

(2) Emission factor for desulfurized coke oven gas is based on higher heating value of 535 BTU/SCF and SO₂ emission factor of 0.447 lbs/MMBTU as per 326 IAC 7-4-1.1(c)(22)(G)(iv).

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

METHODOLOGY

Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) * 8760 hours/year * 1 MMCF/1000 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

Appendix A: Emission Calculations
Future PTE minus Past PTE

Company Name: U.S. Steel - Gary Works
Address: One North Broadway Street, Gary, Indiana 46204
SSM: 089-19709
Plt ID: 089-00121
Reviewer: ERG/SD
Date: March 10, 2005

Potential To Emit in Four (4) Reheat Furnaces

	PM	PM10	SO ₂	NO _x	VOC	CO
Future PTE (Burning COG)	32.2	22.6	1241	415	95.5	6.23
Past PTE (Burning NG)	39.5	39.5	3.12	1454	28.6	436
Net Emission Increases	-7.3	-16.9	1238	-1039	67.0	-430



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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www.IN.gov/idem

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402-3199

October 20, 2005

Re: **Significant Source Modification**
089-20118-00121

Dear Mr. Alexander:

On September 24, 2004, US Steel - Gary Works submitted an application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to reline one of their four (4) existing blast furnaces, located at One North Broadway, Gary, IN 46402. The relining of No. 13 Blast Furnace (now identified as No. 14 Blast Furnace) consists of the following activities:

- (a) Replacement of the furnace refractory lining with new and thinner refractory brick.
- (b) Replacement of furnace shell.
- (c) Removal and replacement of the top charging system with a new "bell-less" charging system.
- (d) Placement of new copper staves in the mantle area of the furnace.
- (e) Installation of new copper cooling plates and a new bustle pipe.
- (f) Repair of the checker work brick in the stoves and various structural, mechanical, and electrical repairs.
- (g) Enlargement of the slag granulator and addition of a stack.
- (h) Changes to the casthouse and casthouse emissions control system to improve capture efficiency of hoods at the tap holes, iron troughs, and runners.
- (i) Removal and replacement of the existing system for cleaning blast furnace gas with a more efficient scrubbing system.

Pursuant to the provisions of 326 IAC 2-7-10.5, a significant source modification is hereby approved as described in the attached Technical Support Document.

All other existing conditions and requirements applicable to the No. 14 Blast Furnace (formerly No. 13 Blast Furnace) shall remain unchanged and in effect. The source may begin construction and operation of the No. 14 Blast Furnace when this significant source modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Ms. Iryn Calilung of my staff (317) 233-5692 or (800) 451-6027, and ask for extension 3-5692.

Sincerely,

Original Signed By:
Paul Dubenetzky
Assistant Commissioner
Office of Air Quality

cc: File - Lake County
Lake County Health Department
Air Compliance Section Inspector - DCS
NWRO
Compliance Data Section
Permit Administrative and Development Section

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October 29, 2004

Mr. James Alexander
U.S. Steel - Gary Works
One North Broadway
Gary, Indiana 46402

Re: Significant Source Modification No:
089-19678-00121

Dear Mr. Alexander:

U.S. Steel - Gary Works applied for a Part 70 operating permit on December 13, 1996 for a steel mill. An application to modify the source was received on July 12, 2004. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (a) One (1) natural gas fired boiler at the coke plant boiler house, identified as the temporary rental boiler (CSS80163), to be constructed in 2004, with a maximum heat input capacity of 235 MMBtu/hr and equipped with a low NOx burner, and exhausting to the existing stack CS6066.
- (b) Two (2) boilers at the coke plant boiler house, identified as boilers No. 9 (CSS80164) and No. 10 (CSS80165), to be constructed in 2004, each with a maximum heat input capacity of 235 MMBtu/hr, and exhausting to stacks CS6067 and CS6068, respectively. These boilers are equipped to combust natural gas and/or coke oven gas.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

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Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC

cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
Northwest Regional Office
Air Compliance Section Inspector – Rick Massoels/Ramesh Rejuja
Compliance Data Section
Administrative and Development
Technical Support and Modeling - Michele Boner
Title V Reviewer – Gail McGarrity
Title V File – T089-7663-00121

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PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**U.S. Steel - Gary Works
One North Broadway
Gary, Indiana 46402**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Significant Source Modification No.: 089-19678-00121

Issued by: Original Signed by
Paul Dubenetzky, Branch Chief
Office of Air Quality

Issuance Date: October 29, 20004

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www.state.in.us/idem

May 27, 2004

Mr. James Alexander
U.S. Steel - Gary Works
One North Broadway
Gary, Indiana 46402

Re: 089-18862-00121
Permit Review Request

Dear Mr. Alexander:

U.S. Steel - Gary Works applied for a Part 70 operating permit on December 13, 1996 for a steel mill, located at One North Broadway, Gary, Indiana 46402. On April 19, 2004, the Office of Air Quality (OAQ) received a letter from U.S. Steel - Gary Works requesting permission to install a new fume/mist capture and control system to collect and vent fumes from the existing chemical treatment tanks at the Nos. 5 and 6 Electrolytic Tinning Lines (ETLs).

The Nos. 5 and 6 ETLs perform dip coating operations which coat cold-rolled steel strip electrolytically with a layer of tin. Currently, the chemical treatment tanks at both the Nos. 5 and 6 ETLs are not controlled. The mist droplets emitted from these treatment tanks are corrosive and may deposit onto the surface of the steel strip through general air circulation in the room. To reduce product quality problems, the source proposed to install a fume/mist capture and control system to control the emissions from the existing treatments tanks of Nos. 5 and 6 ETLs.

Since the installation of the control devices is not considered a modification to the existing emission units and will not increase the potential to emit of the existing treatments tanks, IDEM, OAQ has determined that the installation of the new fume/mist capture and control system would not require a permitting action.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this review request to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/YC

cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Rick Massoels/Ramesh Tejuja
Compliance Data Section
Administrative and Development - Sara Cloe



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Commissioner

100 North Senate Avenue
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Indianapolis, Indiana 46206-6015
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(800) 451-6027
www.state.in.us/iderm

Technical Support and Modeling - Michele Boner

000059

Combined Application

X

This permit has been
combined with permit
number:
7663

17041

17041

000060

February 11, 2003

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402

Re: Experimental Operation
EO No. 089-16676-00121

Dear Mr. Smith:

On January 15, 2003, U.S. Steel Gary Works, Gary, Indiana, submitted a letter informing the Office of Air Quality (OAQ) of the intention to conduct an experimental operation to study the mechanism that results in the variability of the condensable fraction of the particulate emissions during the use of urea as a control for SO₂ at the Number 3 Sinter Plant.

Experimental Operation General Information

Unit:	One (1) 5,000 gallon heat traced insulated tank and two (2) 3 gpm gear pumps, including the necessary spray nozzles and interconnecting piping/tubing.
Location of the Operation:	Gary, Indiana
County:	Lake
County Status:	Moderate non-attainment for PM ₁₀ Severe non-attainment for Ozone Primary (Portions of county only) for SO ₂
Purpose of the Operation:	To study the mechanism that results in the variability of the condensable fraction of the particulate emissions during the use of urea as a control for SO ₂ at the Number 3 Sinter Plant.
Starting Date of the Operation:	Seven days from the notification date [326 IAC 2-1.1-3(h)(3)(F)]
Duration of the Operation:	30 days of actual operation
Testing parameters:	SO ₂ and PM ₁₀

Applicable Requirements

Pursuant to 326 IAC 2-1.1-3(h)(3), the above mentioned temporary operation and experimental trial shall satisfy the following requirements:

1. The potential emissions from the operation should be less than 25 tons per year for the duration of the operation. [326 IAC 2-1.1-3(h)(3)(A)]
2. The operation should not be a major source or modification as defined under 326 IAC 2-2, 326 IAC 2-3 or 326 IAC 2-7. [326 IAC 2-1.1-3(h)(3)(B)]
3. The purpose of the operation is to:
 - (a) collect data for experimental purposes, including, but not limited to, process improvements, new product development, and pollution prevention. [326 IAC 2-1.1-3(h)(3)(C)(i)]

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- (b) temporarily conduct an operation not considered as part of the normal operation or production of the source. [326 IAC 2-1.1-3(h)(3)(C)(ii)]
- 4. The experimental trial should not be part of the existing normal operation or production of the source. [326 IAC 2-1.1-3(h)(3)(C)(ii)]
- 5. The duration of the experimental operation should not exceed 30 days of actual operation. [326 IAC 2-1.1-3(h)(3)(D)]
- 6. The source shall submit a report containing the following information, seven (7) days after the conclusion of the experimental operation: [326 IAC 2-1.1-3(h)(3)(G)]
 - (a) The actual dates of the construction and operation.
 - (b) The duration of the operation.
 - (c) The actual emissions occurring during the operation.
- 7. The report shall be submitted to:
Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Experimental Trial Expiration Date

This approval expires after 30 days of actual operating time of the experimental operation.

If you have any questions regarding this approval, please contact Ghassan Shalabi of my staff at 317-233-0431 or at 1-800-451-6027, ext 3-0431.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

GAS

Enclosure: Experimental Trial Operation Report (1 page)

cc: File - Lake County

Lake County Health Department

Air Compliance Section - Ramesh Tejula

Compliance Data Section - Karen Nowak

000062

**Indiana Department of Environmental Management
Office of Air Quality
Permit Branch**

Experimental Trial Operation Report

Source Name: US Steel - Gary Works
Source Location: One North Broadway, Gary, IN 46402
County: Lake
EO No.: 089-16676-00121
Approval Reviewer: Ghassan Shalabi

Milestone Schedule	
Type of unit/operation:	
Actual starting date of the construction:	
Actual ending date of the construction:	
Actual starting date of the operation:	
Actual ending date of the operation:	
Actual number of days of the operation:	
Calculated emissions during the duration of the operation:	
Additional Comments:	

I certify under penalty of law that this report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

cc: Air Compliance Section - Ramesh Tejula

000063



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

August 21, 2002

Mr. James Alexander
U.S. Steel - Gary Works
One North Broadway, MS-70
Gary, Indiana 46402-3199

Re: Minor Source Modification No:
089-15694-00121

Dear Mr. Alexander:

U.S. Steel - Gary Works applied for a Part 70 operating permit on December 13, 1996 for blast furnaces and steel mills. An application to modify existing permit limits was received on June 3, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

This project consists of removing a fuel limit taken previously (MSM 089-14424-00121) to make Emission Offset not applicable. The limit was taken in order to keep contemporaneous NOx emissions below twenty-five tons per year. As NOx is no longer considered an ozone precursor for non attainment permitting purposes, the limit is no longer needed.

The original project consisted of upgrading the existing Electrogalvanizing Line Package Boiler (EGL-1) to increase the steam operating pressure from 100 psig to 135 psig. This was accomplished by increasing the boiler's capacity from 38.9 MMBtu/hr to 39.147 MMBtu/hr. As stated in the original MSM for this project (089-14424-00121), the upgrade consisted of the following changes to the existing boiler:

- (a) replacement of the boiler feedwater pumps to increase feedwater supply pressure;
- (b) upgrade the level control system for the water level control in the boiler drum;
- (c) upgrade the boiler drum safety relief valves; and
- (d) upgrade the steam header pressure control system.

The natural gas fuel burners and fuel supply system were not changed as part of this project, and the capacity of the electrogalvanizing line was not changed. This was a quality control project intended to address the problem of "bald spots" (non-uniform zinc coating thickness) in the electrogalvanizing line.

This permit supercedes MSM 089-14424-00121. The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

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This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Pring, ERG, P.O. Box 2010, Morrisville, North Carolina 27560, or call (919) 468-7840 to speak directly to Mr. Pring. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/MP

cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
City of Gary Division of Air Pollution Control
Northwest Regional Office
Air Compliance Section Inspector - Ramesh Tejula
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner
Office of Air Enforcement - Brian Eaton

000065



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

September 16, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: USS- Gary Works / 089-16365-00121

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Section 112(j) Applicability Determination

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-5(f) this order is effective fifteen (15) days after it is served. When served by U.S. mail, the order is effective eighteen (18) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for a stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure
FN-112jdet.dot 9/16/03

000066



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Joseph E. Kernan
Governor

September 16, 2004

100 North Senate Avenue
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Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Lori F. Kaplan
Commissioner

To: Glenn R. Topping
USS - Gary Works
One North Broadway Street
Gary, IN 46402

CC: Bill Kubiak
USS - Gary Works
One North Broadway Street
Gary, IN 46402

From: Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

RE: Response to Section 112(j)
Applicability Determination Request
Permit ID: 16365

USS - Gary Works, located at One North Broadway Street in Gary, Indiana, submitted a request for an applicability determination regarding the requirements of Section 112(j) of the Clean Air Act (CAA). The letter was submitted in accordance with 40 CFR 63.52(d)(1) and requested that the Indiana Department of Environmental Management, Office of Air Quality (IDEM, OAQ) determine if USS - Gary Works is subject to the requirements of Section 112(j) (40 CFR 63.50 through 63.56).

Section 112(j) does not apply if the United States Environmental Protection Agency (U.S. EPA) promulgates the Section 112(d) - 40 CFR Part 63 NESHAP or "MACT" standard on or before the Section 112(j) deadline. The U.S. EPA Administrator has signed final versions of the final MACT standard for each of the affected source categories, except for boilers, process heaters, and furnaces that burn hazardous waste (40 CFR 63, Subpart EEE). Since these signed, final rules are available on the U.S. EPA Air Toxics Website, USS - Gary Works is no longer subject to Section 112(j).

USS - Gary Works may be subject to one or more of the Section 112(d) MACT standards. If MACT is applicable, USS - Gary Works shall comply with the MACT standard in accordance with the schedule provided in the MACT standard. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), if USS - Gary Works is subject to the MACT, USS - Gary Works should submit an initial notification no later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The MACT and the General Provisions of 40 CFR 63, Subpart A will become new applicable requirements, as defined by 326 IAC 2-7-1(6), that would need to be incorporated into the Part 70 (Title V) permit. If the promulgated MACT is not applicable, no further action regarding the MACT will be necessary.

Questions about Section 112(j), Part 63 NESHAP-MACT Standards, Part 61 NESHAP Standards, or Part 60 New Source Performance Standards (NSPS) should be directed to:

Kimberly Cottrell, P.E.
IDEM, Office of Air Quality
100 North Senate Avenue, Rm 1003
P.O. Box 6015, Indianapolis, IN 46206-6015
(800) 451-6027 extension 3-0870
(317) 233-0870
kcottrel@dem.state.in.us

OR
Madhurima Moulik
IDEM, Office of Air Quality
100 North Senate Avenue, Rm 1003
P.O. Box 6015, Indianapolis, IN 46206-6015
(800) 451-6027 extension 3-0868
(317) 233-0868
mmoulik@dem.state.in.us

000067



June 20, 2002

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402-3199

Dear Mr. Alexander:

Re: Exempt Construction and Operation Status,
089-15929-00121

The application from US Steel – Gary Works, received on April 29, 2002, has been reviewed. The application is to construct a fugitive emission mitigation system at No. 1 BOP shop that employs a capture hood system and ducted to a baghouse. There will be no collateral emissions from this proposed fugitive emission mitigation system which is used to decrease mass emission rates and the opacities of visible emissions emanating through the roof monitors at No. BOP building shop and improve housekeeping / industrial hygiene conditions at floor levels above the vessels. Pursuant to 326 IAC 2-1.1-1(6) the addition of an air pollution control device at an existing source is a minor physical change. Based on the data submitted and the provisions in Section 3 of 326 IAC 2-1.1-3(h)(2), it has been determined that the addition of this pollution control device, to be located at One North Broadway, Gary, Indiana, is classified as exempt from air pollution permit requirements:

- (a) One (1) capture hood system ducted to a baghouse, collection efficiency of 99%, at 11,500 acfm flow rate.

This existing source has submitted their Part 70 application T089-7663-00121 on December 13, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Any change or modification, which may cause an increase in net emissions of PM, PM10 or HAPs from the equipment being controlled by this control equipment, may need an approval from the Office of Air Quality (OAQ).

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

GAS

cc: File - Lake County
Lake County Health Department
Air Compliance – Ramesh Tejula
Northwest Regional Office
Compliance Data Section - Karen Nowak
TV Reviewer – T 089-7663-00121

000068

March 22, 2002

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402

Re: Experimental Operation
EO No. 089-15358-00121

Dear Mr. Alexander:

On March 06, 2002, US Steel - Gary Works, Gary, Indiana, submitted a letter informing the Office of Air Quality (OAQ) of the intention to install a prototype fugitive emission mitigation system at No. 1 BOP shop as an experimental operation.

Experimental Operation General Information

Unit:	Prototype fugitive emission mitigation system at No.1 BOP shop
Location of the Operation:	Gary, Indiana
County:	Lake
County Status:	Moderate non-attainment for PM10 Severe non-attainment for Ozone
Purpose of the Operation:	Decrease mass emission rates and the opacities of visible emissions emanating through the roof monitors at No. 1 BOP shop building and to improve housekeeping / industrial hygiene conditions at floor levels above the vessels.
Starting Date of the Operation:	Seven days from the notification date [326 IAC 2-1.1-3(g)(3)(F)]
Duration of the Operation:	30 days of actual operation
Testing parameters:	PM, PM10, and HAPs

Applicable Requirements

Pursuant to 326 IAC 2-1.1-3(g)(3), the above mentioned temporary operation and experimental trial shall satisfy the following requirements:

1. The potential emissions from the operation should be less than 25 tons per year for the duration of the operation. [326 IAC 2-1.1-3(g)(3)(A)]
2. The operation should not be a major source or modification as defined under 326 IAC 2-2, 326 IAC 2-3 or 326 IAC 2-7. [326 IAC 2-1.1-3(g)(3)(B)]
3. The purpose of the operation is to:
 - (a) collect data for experimental purposes, including, but not limited to, process improvements, new product development, and pollution prevention. [326 IAC 2-1.1-3(g)(3)(C)(i)]
 - (b) temporarily conduct an operation not considered as part of the normal operation

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or production of the source. [326 IAC 2-1.1-3(g)(3)(C)(ii)]

4. The experimental trial should not be part of the existing normal operation or production of the source. [326 IAC 2-1.1-3(g)(3)(C)(ii)]
5. The duration of the experimental operation should not exceed 30 days of actual operation. [326 IAC 2-1.1-3(g)(3)(D)]
6. The source shall submit a report containing the following information, seven (7) days after the conclusion of the experimental operation: [326 IAC 2-1.1-3(g)(3)(G)]
 - (a) The actual dates of the construction and operation.
 - (b) The duration of the operation.
 - (c) The actual emissions occurring during the operation.
7. The report shall be submitted to:
Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Experimental Trial Expiration Date

This approval expires after 30 days of actual operating time of the experimental operation.

If you have any questions regarding this approval, please contact Ghassan Shalabi of my staff at 317-233-0431 or at 1-800-451-6027, ext 3-0431.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

GAS

Enclosure: Experimental Trial Operation Report (1 page)

cc: File - Lake County

Lake County Health Department

Air Compliance Section - Ramesh Tejula

Compliance Data Section - Karen Nowak

000070

**Indiana Department of Environmental Management
Office of Air Quality
Permit Branch**

Experimental Trial Operation Report

Source Name: US Steel - Gary Works
Source Location: One North Broadway, Gary, IN 46402
County: Lake
EO No.: 089-15358-00121
Approval Reviewer: Ghassan Shalabi

Milestone Schedule	
Type of unit/operation:	
Actual starting date of the construction:	
Actual ending date of the construction:	
Actual starting date of the operation:	
Actual ending date of the operation:	
Actual number of days of the operation:	
Calculated emissions during the duration of the operation:	
Additional Comments:	

I certify under penalty of law that this report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:

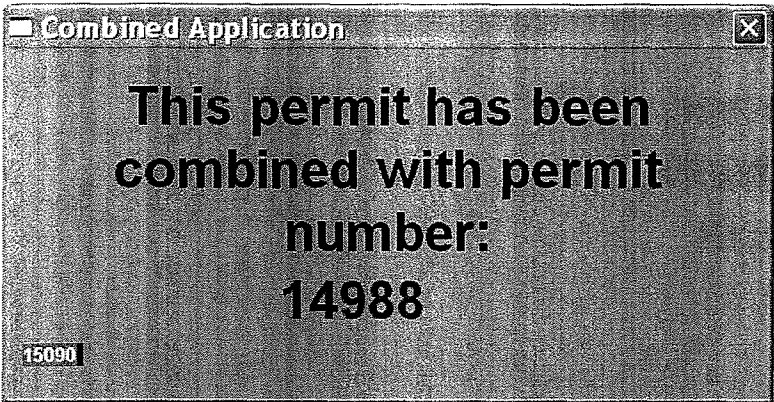
Printed Name:

Title/Position:

Date:

cc: Air Compliance Section - Ramesh Tejula

000071



15090

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SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The upgrade of the existing pushing emissions control system which services Nos. 5 and 7 batteries as follows:

The replacement of the existing baghouse identified as CP3041, fan, dampers, motor and some of the associated duct work with a new baghouse identified as CP6050, new cross over duct work and modified machinery. This modification is expected to increase the exhaust gas flow rate from 134,800 acfm to 180,000 acfm which will improve the capture efficiency of fugitive pushing emissions at the moving capture hood.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 (Nonattainment area particulate limitations: Lake County PM10 coke battery emission requirements) 326 IAC 6-1-10.2

Pursuant to 326 IAC 6-1-10.2 (3), the following emission limits shall apply during the pushing operation:

- (A) The opacity of emissions from the coke side of an oven to be pushed, before the first movement of the coke from the oven to the coke car begins, shall not exceed twenty percent (20%).
- (B) The opacity emissions during the pushing operation shall not exceed twenty percent (20%). The opacity shall be determined using 40 CFR 60, appendix A, method 9, except that the readings shall be taken at fifteen (15) second intervals. Six (6) consecutive readings shall be averaged to determine the opacity. The observer shall only use those backgrounds that are above the elevation of the battery surface. If this condition cannot be met for six (6) consecutive readings, then the opacity shall be determined using the lesser number of consecutive readings.
- (C) The Particulate emissions from the control device stack shall not exceed four hundredths (0.04) pounds per ton of coke pushed. Compliance with this emission limit shall be determined by 40 CFR 60, appendix A, Method 5

D.1.2 Coke oven batteries: emission limitations 326 IAC 11-3-2

Pursuant to 326 IAC 11-3-2 (g) (2), the control device shall be designed and operated in compliance with an operating permit to collect ninety (90%) of the pushing emissions.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

In order to comply with D.1.1, the baghouse for PM control shall be in operation and control emissions from the Nos. 5 and 7 Coke oven pushing at all times that the pushing is being performed.

000073

July 19, 2002

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402-3199

Re: 089-14988-00121
First Significant Modification to
CP 089-8606-00121

Dear Mr. Alexander:

US Steel - Gary Works was issued a permit on July 10, 1998 authorizing the construction of one (1) plate mill heat treatment furnace with maximum heat input capacity of 56.5 MMBtu/hr. A letter requesting changes to this permit was received on October 29, 2001. Pursuant to the provisions of IC 13-15-7-1 a significant modification to this permit is hereby approved as described in the attached Technical Support Document.

The permit is hereby modified as follows:

(1)

Emission Offset Minor Source Limit

7. That the input natural gas to the heat treatment furnace shall be limited to 279.2 million cubic feet per year, rolled on a daily basis. This production limitation is equivalent to NOx emissions of 25.1 tons per 365-day period, rolled on a daily basis. The input natural gas to the annealing furnaces shall be limited to 3.1 million cubic feet per month. This production limitation is equivalent to NOx emissions of 0.22 tons per month. Therefore, the Emission Offset rules, 326 IAC 2-3, will not apply.

The following table shows the VOC emissions increases due to modifications at Gary Works during the five-year period prior to and including 2001 (i.e. 1997 through 2001).

Modification Projects	VOC Emissions Increase (tons/year)
160/210-inch Plate Mill Heat Treatment Furnace	0.42
Existing Hydrogen Atmosphere Batch Annealing Furnace	0.048
Levy Plant Modification	0.17
RTO Sludge Dryers	0.02
Oil Reclamation Plant Modification	0.17

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U.S. Aggregates Slag Processing Facility	0.01
Repermit Boiler No. 4 A	0.36
Sinter Plant Burners/Coke Oven Battery Injection Jets	0.75
EGL Boiler Modifications	0.072
84-Inch HSM Reheat Furnaces COG Redistribution Project	2.74
Total VOC Emissions Increase	4.76

VOC emissions increases over the past 5 years are less than the de minimis levels of 25 tons per year for VOC, therefore, 326 IAC 2-3 (Emission Offset) does not apply.

(2)

The monthly report for the NOx emissions from the plate mill heat treatment furnace was changed to reflect the above mentioned changes.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ghassan Shalabi, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Ghassan Shalabi or extension (3-0431), or dial (317) 233-0431.

Sincerely,
Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

GAS

cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
City of Gary Division of Air Control
Northwest Regional Office
Air Compliance Section Inspector - Ramesh Tejula
Compliance Data Section - Karen Nowak
Administrative and Development - Lisa Lawrence
Technical Support and Modeling - Michele Boner

000075

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402-3199

Re: 089-14988-00121
First Significant Modification to
CP 089-8606-00121

Dear Mr. Alexander:

US Steel - Gary Works was issued a permit on July 10, 1998 authorizing the construction of one (1) plate mill heat treatment furnace with maximum heat input capacity of 56.5 MMBtu/hr. A letter requesting changes to this permit was received on October 29, 2001. Pursuant to the provisions of IC 13-15-7-1 a significant modification to this permit is hereby approved as described in the attached Technical Support Document.

The permit is hereby modified as follows:

(1)

Emission Offset Minor Source Limit

7. That the input natural gas to the heat treatment furnace shall be limited to 279.2 million cubic feet per year, rolled on a daily basis. This production limitation is equivalent to NOx emissions of 25.1 tons per 365-day period, rolled on a daily basis. The input natural gas to the annealing furnaces shall be limited to 17.32 million cubic feet per month. This production limitation is equivalent to NOx emissions of 1.24 tons per month. Therefore, the Emission Offset rules, 326 IAC 2-3, will not apply.

The following table shows the VOC emissions increases due to modifications at Gary Works during the five-year period prior to and including 2001 (i.e. 1997 through 2001).

Modification Projects	VOC Emissions Increase (tons/year)
160/210-inch Plate Mill Heat Treatment Furnace	0.42
Existing Hydrogen Atmosphere Batch Annealing Furnace	0.048
Levy Plant Modification	0.17
RTO Sludge Dryers	0.02
Oil Reclamation Plant Modification	0.17

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November 30, 2001

Mr. Justin Gean
U.S. Steel - Gary Works
One North Broadway, MS11-1
Gary, Indiana 46402-3199

Re: 089-14950
First Administrative Amendment to
Minor Source Modification 089-14658-00121

Dear Mr. Gean:

U.S. Steel - Gary Works was issued a permit on October 2, 2001 for a lime storage silo baghouse. On October 22, 2001, the source indicated there was no Emergency Occurrence form or Compliance Deviation Form in the permit. Pursuant to the provisions of 326 IAC 2-7-11, the permit is hereby administratively amended to add both forms (pages 18-22 of the Minor Source Modification).

All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Pring, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7840 to speak directly to Mr. Pring. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
ERG/MP

cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
City of Gary Division of Air Pollution Control
Northwest Regional Office
Air Compliance Section Inspector - Ramesh Tejula
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner
Office of Air Enforcement - Brian Eaton

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December 17, 2001

Mr. James Alexander
U.S. Steel - Gary Works - Synthetic Fuel Plant
One North Broadway Street
Gary, IN 46402

Dear Mr. Alexander:

Re: Exempt Construction Status,
089-14692-00121

The application from U.S. Steel - Gary Works - for the construction of Synthetic Fuel Plant, received on July 25, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following synthetic fuel plant, to be located at One North Broadway Street, Gary, Indiana, is classified as exempt from air pollution permit requirements:

- (a) One (1) enclosed coal blending unit where 500 tons per hour of coal is mixed with a binding agent venting to the atmosphere.
- (b) One (1) covered coal conveyance system with ten (10) transfer points venting to the atmosphere.

The following conditions shall be applicable:

- (1) Coal blending and conveyance are to be enclosed to control fugitive emissions.
- (2) The facility shall not process more than 500 tons per hour of coal.
- (3) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following stringent opacity limitations as Gary, Indiana is in the section of Lake County where the more stringent standards apply:
 - (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (4) Pursuant to 326 IAC 6-1-2 (a) (Nonattainment Areas Particulate Emission Limitations for General Sources), this facility shall not emit particulate matter in excess of 0.03 grains per dry standard cubic feet. Compliance with this limit also makes 326 IAC 2-3 (Emission Offset) not applicable.

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Mr. Jim Alexander
U.S. Steel - Gary Works
1 North Broadway
Gary, Indiana 46402-3199

Re: Experimental Operation
EO No. 089-14649-00121

Dear Mr. Alexander:

On July 20, 2001, U.S. Steel, Gary, Indiana, submitted a letter informing the Office of Air Quality (OAQ) of the intention to perform an experimental operation on the #6 Blast Furnace.

Experimental Operation General Information

Unit:	Blast Furnace #6
Location of the Operation:	Gary, Indiana
County:	Lake
County Status:	Nonattainment
Purpose of the Operation:	Evaluation of the effects of oxygen enrichment on combustion air.
Starting Date of the Operation:	July 28, 2001 [326 IAC 2-1.1-3(g)(3)(F)]
Duration of the Operation:	28 days of actual operation
Testing parameters:	Fuel usage and total emissions

Applicable Requirements

Pursuant to 326 IAC 2-1.1-3(g)(3), the above mentioned temporary operation and experimental trial shall satisfy the following requirements:

1. The potential emissions from the operation should be less than 25 tons per year for the duration of the operation. [326 IAC 2-1.1-3(g)(3)(A)]
2. The operation should not be a major source or modification as defined under 326 IAC 2-2, 326 IAC 2-3 or 326 IAC 2-7. [326 IAC 2-1.1-3(g)(3)(B)]
3. The purpose of the operation is to:
 - (a) collect data for experimental purposes, including, but not limited to, process improvements, new product development, and pollution prevention. [326 IAC 2-1.1-3(g)(3)(C)(i)]
 - (b) temporarily conduct an operation not considered as part of the normal operation or production of the source. [326 IAC 2-1.1-3(g)(3)(C)(ii)]

000079

Mr. James Alexander
U.S. Steel - Gary Works
One North Broadway, MS-70
Gary, Indiana 46402-3199

Re: Minor Source Modification No:
089-14658-00121

Dear Mr. Alexander:

U.S. Steel - Gary Works applied for a Part 70 operating permit on December 13, 1996 for blast furnaces and steel mills. An application to modify the source was received on May 22, 2001. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

This project consists of the installation of one (1) active dust control system, or baghouse (LRS-1), with a capacity of 1,089 acfm and a grain loading of 0.007 (grains/cubic foot) on an existing lime storage silo at the Coke Plant Boiler House.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Pring, ERG, P.O. Box 2010, Morrisville, North Carolina 27560, or call (919) 468-7840 to speak directly to Mr. Pring.

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